

TauRIS

The Electronic Clocking System

Fanciers' Manual

1. Introduction

In pigeon racing, so-called clocking systems are used to ensure the accurate registration of entry times. Until now, pigeons were fitted with rubber rings for each flight. On arrival, these rings were removed and entered into race timers.

With the progress of technology, mechanical systems are increasingly being replaced by electronic systems. The latter enable an accurate recording to take place at the moment the pigeon enters the loft. The work which has to be carried out by the Club committees (entry and clocking committees) and fanciers is thus reduced to a minimum.

In the following pages, the construction and functions of the TauRIS electronic clocking system are described in detail.

With this system, code carriers (electronic leg rings) assigned to the individual pigeons are recorded by sensors in the entry traps. The sensors transfer the code via a cable system to the electronic clocking system, which in turn automatically carries out the registration of pigeon and race time.

The Electronic Clocking System TauRIS consists of:

1. Loft systems for the fanciers and the
2. Club house equipment

2. Construction of the Loft System

The loft system consists of a terminal and sensors in the traps. The terminal and the sensors are connected by an adapter.

2.1 Terminal

The terminal is a multi-functional computer with a large memory capacity. It is responsible for controlling and archiving racing and control data. Time records are carried out via the internal quartz-controlled timepiece.

The following mutually compatible functions are all controlled or carried out by the terminal:

1. Assignment of code rings to the loft stock at the beginning of a season
2. Management of the loft stock by the fancier (nomination and pooling).
3. Data entry device for the entering of pigeons at the entry point.
4. Race timer for the fancier, started and set by the clocking committee.

5. Time controls and data transfer in the form of a printed or electronically (diskette, modem) registration sheet through the clocking committee.

The functions 2-5 rotate throughout the racing weeks.

2.2 Sensors

The traps of a loft system can be fitted with one or more sensors. All of the sensors within a single loft system are subsequently connected by means of a cable. Each individual sensor consists of a receptor aerial, receptor electronics and a microprocessor. The electronics, the aerial and the cable plug are housed in a closed case.

2.3 Sensor Adaptor

The power supply of the sensor system and the coupling of the terminal with the sensors are both carried out by the adaptor. The sensors and the adaptor are flexibly connected by means of a cable, so that a fixed installation in the loft system is possible. The terminal is connected with the sensor system when it is placed on the adaptor.

2.4 Routine/Program description

via the terminal every phase of every work routine is program-controlled. The software configuration of the terminal enables necessary adaptations of the system to be carried out, e.g. changes in the racing rules of the club.

Two Separate manuals, one each for the fancier and the Club Committee, describe the routines.

2.5 Summary

The transparency of the system remains uniform, from the smallest to the largest loft system.

The software controlled TauRIS concept allows for adaptations to future pigeon racing requirements.

The transparent construction of the TauRIS electronic clocking system guarantees comprehensive control over every routine (terminal-adaptor-sensor), in line with state of the art technology. Imitation of the familiar, conventional clocking concept (start time, control time, control loft) renders the functional principle clear for the user, as well as granting the supervisory bodies a clear overview.

The TauRIS functional principle and the clear routine behind it are illustrated by the TauRIS loop. From the electronic entry sheet for the fancier via entering and clocking to the race timer and then via the clocking control back to release for the fancier - an easily understandable circulation of events.

The loop is a one-way street! If the terminal is, for example, set for entry, then the fancier can only attain release by setting, registering and controlling. Pigeons do not have to be entered in order to undertake these steps.

3. Operating the System

Warning: Before working on the system, disconnect the main plug!

3.1 Conditions for use

3.1.1 Temperature during use

Terminal	32 F to 122 F	0 C to +50 C
Adapter and Sensor	14F to 122F	-10 C to 50 C

3.1.2 Temperature during storage

Terminal	32 F to 140 F	0 C to +60 C
Adapter and Sensor	14F to 140 F	-10 C to +60 C

3.1.3 Proof Specifications

Terminal	1P63
Mains Supply	1P40
Sensor Adapter	1P40
Sensor	1P63

These proof specifications are valid for devices on delivery, not taking into account wear and tear. In particular, repeatedly opening and closing sensors will affect their impermeability.

3.2 Installation Instructions

In order to ensure that the registration details are correct, the pigeon must be within the area influenced by the sensor for a least 1/5 of a second. This length of time can be attained without a braking rod if the edge of the sensor is mounted directly on the descending edge.

The height of the entry traps should not exceed 6.25 inches (16 cm), so that pigeons cannot jump over each other. An entry hatch with of 4.75 inches (12 cm) guarantees that the pigeon and its code ring are guided securely through the area influenced by the sensor. The dividing walls between the traps should be pulled out to protrude beyond the descending edge, in order to prevent the pigeons from flying back out of the loft.

The sensor surfaces bay be covered. The chosen cover may be plastic, wood, asbestos, cement, etc., but on no account metal. A thickness of .20 inches (0.5 cm) should not be exceeded, so that the receptor distance, approximately 2.25 inches (6.0 cm) for the R/O ring and approximately 3.14 inches (8 cm) for the R/W ring above the sensor surface, is not unduly restricted.

Metal surfaces near the sensor must be at least 4 inches (10 cm) from it, if they are not to infringe the performance of the sensor.

Install the sensors so that they are at least 6 cm apart (measured from the widest part of the sensor). If there is any doubt regarding the perfect functioning of the entrance, we recommend that in each case one **sensor breadth be left free to the next sensor**.

When the cables are being laid, ensure that it is not possible for water to run along them and thus enter the sensor. Place a loop in the cable a little in front of the sensor so that the water can drop off at this point.

If you should alter the position of the sensors during the racing season, note that the cable grommets in the opened sensors may be deformed and no longer seal the sensor. The crushing seal on the middle screw is imperative in order to prevent water from penetrating at this point. All of the screws on the sensor should be tight.

The impermeability of the sensors can no longer be guaranteed if the sensors are opened.

If you install your sensors as suggested, your pigeons will be registered accurately. After assembly, check your system carefully with the menu command <9> **Test**, in order to ensure that no registration errors occur during the races.

4 TauRIS Terminal Descriptions

The TauRIS terminal controls and monitors the entry and registration of racing pigeon flight data in the loft system's electronic clocking system.

This section only provides handling instructions for the fancier. Assigning pigeons to the code rings, entering the pigeons, setting up the clocks and controlling the clocks are all tasks exclusively for the Club committees. The necessary instructions are given separately.

Power to the terminal is normally supplied via the adapter. The terminal may be used without the adapter if it is fitted with batteries, either disposable (4x1.5 mignon) or rechargeable (4x1.2 V NiCd).

Two of the terminal's functions are of particular importance to the fancier:

1. Data entry device for nominations and pools (electronic data entry sheet)
2. Race timer

Switching between the data entry terminal and the race timer is carried out by the entry and clocking committees in the club.

The telephone keypad with its four additional arrow keys guarantee easy use. Don't worry (!). You cannot delete your data using the keypad and in most cases the system will detect incorrect use.

The descriptions include:

[] for key functions (pressing the appropriate key)

<> for calling up certain functions from the Select menus
Menu denotes the terminal's information window
Cursor denotes the flashing rectangle in the menu

And now we come to the operation of the system. Simply place your terminal on the sensor adapter. The adapter must, of course, first be supplied with power from the mains!

When the terminal is switched on, the correct functioning of the system is checked. The information "**Contact Service**" may appear.

1. If this information appears the first time the program is called up or before the loft stock is loaded (in the Club), then it may be ignored.
2. If this information appears later, please contact our service personnel.

4.1 The Overview Menu

This is the display that you get whenever you place you TauRIS terminal on the PC/sensor adapter (providing there are no batteries in the terminal; if so, you can obtain this display via [0]).

The display shows the user's number (region, federation, club, fancier), the user's name, the loft stock (number of pigeons/assigned pigeons) and the current time.

4.2 Automatic switch-off

Using the overview menu, the terminal may be switched off with the [=]key and switched on again with the [=>] key. This will only function, however, if batteries are inserted in the terminal and the terminal is not placed on the adapter. If the terminal is removed from the adapter and no key is pressed, the device will automatically switch itself off after approximately 2 minutes.

4.3 The Select Menu

[Start] always brings you to the select menu. From this menu you can call up the functions with a <>.

<1>	Nomin.:	Nominate pigeons
<5>	View:	View registrations
<2>	Pool:	Place pools
<9>	Test:	Test race (own race simulation)

4.4 Nominating

[1] brings you to the nominations. First you see an overview of all the nominated pigeons. If you select [1] again, you will see the first pigeon from you loft stock.. With the arrow keys you can now "flick through" to the pigeon which you would like to nominate once or several times.

Go to: [?] advances 1 pigeon further
[?] decreases 1 pigeon back
[?] advances 10 pigeons further on

Pigeons which have already been registered will appear in the menu. When flicking through, they will be displayed in the order in which they entered the loft.

4.7 Test – The Private Race

[9] triggers the sensor test. The sensors are activated and the display shows the number of connected sensors. Assigned pigeons can now be recorded by means of the sensors. The last pigeon to be recorded in each case is displayed with the ring number, the date and the time of registration. <> contains the number of recorded pigeons.

With [Start] and [5] you can display the recorded pigeons.

If a sensor test is carried out in the clocking mode, the correct functioning of the entire system is verified. The quantity of tests carried out will be displayed as well as the number of the sensor which recorded the ring. This function automatically switches back to “clocking” 30 seconds after the last test.

4.8 Registering with the TauRIS System

After your pigeons have been entered by the entry committee and your clock has been set by the clocking committee, your TauRIS terminal will be handed to you in the form of a racing timer.

Back home, place your timer on the sensor adapter of your TauRIS loft system. The system will automatically switches to the registration mode.

Warning: if batteries are in use, it might be necessary to activate the registration with [Start] and [4]!

Whilst the race is being registered, the display repeatedly shows the latest pigeon to come in, together with its ring number, the date and the registration time.

With [Start] and [5] you can display the recorded pigeons.

Important! If you are in the menu <5> view when pigeons cross the sensors, then these pigeons will be recorded. The time will not be taken, however, until you switch the terminal back to registration mode with [Start] and [4].

When the race is over, simply remove your terminal from the adapter and take it to the Club House. Here the timer will be controlled and the registration data recorded for the race evaluation.

4.9 Re-accessing the Clock

After every race, the terminal must be re-accessed, either by you or by the Club clocking committee. To do this, enter the 4-digit codeword (each digit will be marked by an asterisk in the display!) and confirm with [#].

The terminal program version 5.34 can separately record the loft stocks for loft communities of up to 4 fanciers in general.

The following points should be observed when using the multi-fancier terminal:

- 1 The loft stock is loaded from the Club PC in the usual way, using the undocumented menu command <3>. With “Cont.”, the loading potential of other fanciers is displayed for as long as the program version permits.
- 2 If more than one fancier’s loft stock exists, the serial number of the fancier’s loft stock appears before the fancier’s name in the Overview menu. The cursor keys [?] and [?] enable you to flick through the Overview menu and select individual fanciers. The fancier’s serial number, the fancier’s name and the loft stock with the number of pigeons, as well as the field which this loft stock occupies in the overall stock, appear in the display.
- 3 Assignment of the loft stocks to the code rings is carried out in the usual way, except that here the appropriate loft stock for the fancier in question is listed in the Overview menu.
- 4 {The pigeon data is re-saved via the undocumented menu command <3>, whereby continued selection or several fanciers is displayed afterwards on the PC.
- 5 Pigeons can be nominated and pools placed in the usual way, except that here, too, the fancier in question must be selected from the Overview menu.
- 6 In the documentation (entry sheet or registration sheet), a comprehensive list of the entire loft stock of every fancier is printed. References to the serial numbers and names of every fancier appear in the display.
- 7 When the race results are transferred to the computer for race evaluation they will be transferred separately for each fancier.

6 General Information

6.1 Delivery and Packaging

Upon delivery or upon receiving the goods, the recipient should immediately look at the delivery note to check whether the contents are complete, and then check the devices for any signs of damage. If there should be any cause for complaint whatsoever, Ruter EPV-Systeme GmbH should be informed immediately. In this case, the system may not be put into action. In order to avoid transport damage, we recommend that goods are only dispatched in their original packaging. Please retain the latter for this purpose.

6.2 Guarantee

Before a device leaves our premises, it is subjected to a number of tests and quality controls. If, in spite of this, a defect should occur, Ruter EPV-Systeme GmbH offers a one-year guarantee.

The guarantee period begins on the date of delivery.

The guarantee does not cover the following:

- 1 Damage caused by a failure to observe the instructions for use or as a result of improper use. Damage caused by external influences.
- 2 Damage to devices on which the serial number or the seal have been removed, destroyed or tampered with.

A valid guarantee is to be proven by means of the invoice date. Please retain your invoice for this purpose.

The guarantee period will not be extended following the submission of a guarantee claim.

Important! Always ensure that your TauRIS system is not live before you disconnect the sensors, expand the system or change the cables. Do not forget that your guarantee will be forfeited in the case of damage occurring as a result of improper use.

6.3 Installing Additional TauRIS Sensors

When you get new sensors, proceed as follows:

1. Ensure that your system is not live (pull the plug out!).
2. Unscrew the last sensor (only one cable may be connected at once). Remove the end plug (green plug with green wire) and insert the connector cable of the new sensor. Pay attention to the fact that the green plugs bear differing codes and that each one only fits on of the two pin boards.
3. Open the last new sensor and insert the end plug into the pin board which is still free (don't forget to pay attention to the code!).
4. Screw the sensors back up.
5. Check your TauRIS system using the sensor test. The correct number of sensors should appear in the display.
6. Please note that repeatedly opening and closing the sensors will affect their impermeability.

6.4 Exchanging the Connector Cables

1. Ensure that your system is not live (pull the plug out!).
2. Unscrew the sensors. Remove the old connector cable and insert the new one (don't forget to pay attention to the code@).
3. Screw the sensors back up.
4. Check your TauRIS system using the sensor test. The correct number of sensors should appear in the display.
5. Please contact us if you have any problems with the installation.

6.5 Battery Operation

A battery connector cable enables you to operate your TauRIS loft system with two 12V disposable or rechargeable batteries.

Rueter EPV-Systeme GmbH's products include a set of cables with which you may connect car batteries.

Contents: 1 battery connector cable with fuse (T 1.6A 6x30)
1 connector cabled

Instructions for connecting 2 12V car batteries:

1. Place two car batteries next to each other with their poles reversed.
2. Connect the two batteries with the connector cable. Connect the red clamp to the plus pole and the black clamp to the minus pole.
3. Connect the battery connector cable to the batteries. Connect the red clamp to the plus pole and the black clamp to the minus pole.
4. Join the battery connector cable to the TauRIS loft system.

Important! Pay particular attention to the poles of the battery connector cable!
Plus Pole (+) -> red
Minus Pole (-) -> black

Always remove the battery connector cable from the sensor adapter before you recharge the batteries!

6.6 Guarantee Restrictions

Rueter EPV-Systeme GmbH accepts no liability for errors or loss of data occurring as a result of incorrect operation, breakdown or improper use of the TauRIS electronic clocking system.